IN THE CLAIMS

Claims 1-42 (Canceled)

43. (Currently Amended) An imaging system, comprising:

a two-dimensional array of photosensors, each photosensor having a center point;

a non-telecentric lens positioned over said two-dimensional array of photosensors; and

a two-dimensional array of microlenses positioned over said two-dimensional array of photosensors, each microlens being associated with a corresponding photosensor, each microlens having a center point;

said microlens being positioned over said corresponding photosensor such that a center point of a microlens is offset from a center point of a corresponding photosensor, each offset having an amount and a direction such that said amounts and directions spatially vary across said two-dimensional array of photosensors;

said spatial variation being determined based on ~~optical characteristics~~ a variation of a chief ray angle of said non-telecentric lens across a focal surface of the non-telecentric lens and optical properties of said two-dimensional array of photosensors and said microlenses such that light sensitivity of each pixel is maximized.

44. (Original) The imaging system as claimed in claim 43, further comprising:

a color filter array positioned over said two-dimensional array of photosensors.

45. (Original) The imaging system as claimed in claim 44, wherein said color filter array comprises a plurality of color filter areas, each color filter area being associated with a corresponding photosensor and having a center point;

said color filter area being positioned over said corresponding photosensor such that said center point of said color filter area is offset from said center point of said corresponding photosensor, each offset having an amount and a direction such that said amounts and directions spatially vary across said two-dimensional array of photosensors;

said spatial variation being determined based on optical characteristics of said non-telecentric lens and optical properties of said two-dimensional array of photosensors and said color filter areas such that crosstalk is minimized.

46. (Original) The imaging system as claimed in claim 43, further comprising:

a layer of transmissive apertures positioned over said two-dimensional array of photosensors, each aperture being associated with a corresponding photosensor and having a center point.

47. (Original) The imaging system as claimed in claim 46, wherein said aperture is positioned over said corresponding photosensor such that said center point of said aperture is offset from said center point of said corresponding photosensor, each offset having an amount and a direction such that said amounts and directions spatially vary across said two-dimensional array of photosensors;

said spatial variation being determined based on optical characteristics of said non-telecentric lens and optical properties of said two-dimensional array of photosensors and said apertures such that stray light signals are minimized.

48. (Original) The imaging system as claimed in claim 46, wherein said layer of transmissive apertures is a metal layer of apertures such that the metal layer blocks stray radiation and the apertures allow radiation to pass therethrough.

49. (Currently Amended) An imaging system, comprising:

a two-dimensional array of photosensors, each photosensor having a center point;

a non-telecentric lens positioned over said two-dimensional array of photosensors; and

a color filter array positioned over said two-dimensional array of photosensors, said color filter array including a plurality of color filter areas, each color filter area being associated with a corresponding photosensor and having a center point;

said color filter area being positioned over said corresponding photosensor such that said center point of said color filter area is offset from said center point of said corresponding photosensor, each offset having an amount and a direction such that said amounts and directions spatially vary across said two-dimensional array of photosensors;

said spatial variation being determined based on ~~optical characteristics~~ a variation of a chief ray angle of said non-telecentric lens across a focal surface of the non-telecentric lens and optical properties of said two-dimensional array of photosensors and said color filter areas such that crosstalk is minimized.

50. (Original) The imaging system as claimed in claim 49, further comprising: a layer of transmissive apertures positioned over said two-dimensional array of photosensors, each aperture being associated with a corresponding photosensor and having a center point.

51. (Original) The imaging system as claimed in claim 50, wherein said aperture is positioned over said corresponding photosensor such that said center point of said aperture is offset from said center point of said corresponding photosensor, each offset having an amount and a direction such that said amounts and directions spatially vary across said two-dimensional array of photosensors;

said spatial variation being determined based on optical characteristics of said non-telecentric lens and optical properties of said two-dimensional array of photosensors and said apertures such that stray light signals are minimized.

52. (Original) The imaging system as claimed in claim 50, wherein said layer of transmissive apertures is a metal layer of apertures such that the metal layer blocks stray radiation and the apertures allow radiation to pass therethrough.

53. (Currently Amended) An imaging system, comprising:

a two-dimensional array of photosensors, each photosensor having a center point;

a non-telecentric lens positioned over said two-dimensional array of photosensors; and

a layer of transmissive apertures positioned over said two-dimensional array of photosensors, each aperture being associated with a corresponding photosensor and having a center point;

said aperture being positioned over said corresponding photosensor such that said center point of said aperture is offset from said center point of said corresponding photosensor, each offset having an amount and a direction such that said amounts and directions spatially vary across said two-dimensional array of photosensors;

said spatial variation being determined based on ~~optical characteristics~~ a variation of a chief ray angle of said non-telecentric lens across a focal surface of the non-

telecentric lens and optical properties of said two-dimensional array of photosensors and said apertures such that stray light signals are minimized.

54. (Currently Amended) An imaging system, comprising:

a two-dimensional array of photosensors, each photosensor having a center point;

a non-telecentric lens positioned over said two-dimensional array of photosensors;

a two-dimensional array of microlenses positioned over said two-dimensional array of photosensors, each microlens being associated with a corresponding photosensor, each microlens having a center point;

a color filter array positioned over said two-dimensional array of photosensors, said color filter array including a plurality of color filter areas, each color filter area being associated with a corresponding photosensor and having a center point; and

a layer of transmissive apertures positioned over said two-dimensional array of photosensors, each aperture being associated with a corresponding photosensor and having a center point;

said microlens being positioned over said corresponding photosensor such that said center point of said microlens is offset from said center point of said corresponding photosensor, each microlens offset having an amount and a direction such that said amounts and directions spatially vary across said two-dimensional array of photosensors;

said color filter area being positioned over said corresponding photosensor such that said center point of said color filter area is offset from said center point of said corresponding photosensor, each color filter area offset having an amount and a direction such that said amounts and directions spatially vary across said two-dimensional array of photosensors;

said aperture being positioned over said corresponding photosensor such that said center point of said aperture is offset, in said first direction, from said center point of said

corresponding photosensor, each aperture offset having an amount and a direction such that said amounts and directions spatially vary across said two-dimensional array of photosensors;

said spatial variation of said microlens offsets being determined based on ~~optical characteristics~~ a variation of a chief ray angle of said non-telecentric lens across a focal surface of the non-telecentric lens and optical properties of said two-dimensional array of photosensors and said microlenses such that light sensitivity of each pixel is maximized;

said spatial variation of said color filter area offsets being determined based on optical characteristics of said non-telecentric lens and optical properties of said two-dimensional array of photosensors and said color filter areas such that crosstalk is minimized;

said spatial variation of said aperture offsets being determined based on optical characteristics of said non-telecentric lens and optical properties of said two-dimensional array of photosensors and said apertures such that stray light signals are minimized.

55. (New) The imaging system as claimed in claim 43, wherein each of said apertures is positioned over said corresponding photosensor to block a substantial part of light that does not pass through said corresponding microlens.

56. (New) The imaging system as claimed in claim 50, wherein each of said apertures is positioned over said corresponding photosensor to block a substantial part of light that does not pass through said corresponding microlens.